

# THE FOUNDING OF THE ORGANIZATION FOR TROPICAL STUDIES, Inc.

(OTS: PRESENT AT THE PRE-CONCEPTION, CONCEPTION, AND BIRTH:

A PERSONAL PERSPECTIVE)

By Dr. Jay M. Savage

## INTRODUCTION

As we approach the celebration of the 45<sup>th</sup> anniversary of the founding of OTS, I thought it would be of interest to record my memories of the events leading up the formation of the organization. Don Stone in 1988 produced a fine coverage of some aspects of these events and the subsequent history of OTS through 1987 based on his review of many relative documents and correspondence in our archives. I remain optimistic that I will be present at OTS' 50th anniversary but perhaps it is best not to defer writing these recollections until I am 85 years old.

My involvement in Costa Rica began in 1959, as detailed in my book on the Amphibians and Reptiles of Costa Rica (2002). At that time I was a junior faculty member in biology at the University of Southern California. Through the stimulus of Andrew Starrett, a fellow faculty member in biology, and his wife Holly, we developed a research project aimed at studying the ecogeographic distribution of the herpetofauna of Costa Rica that was funded by NSF. Three of my graduate students, Arden H. Brame, Jr. II, Arnold G. Kluge and Robert J. Lavenberg carried out the bulk of the fieldwork on the project during the spring and summer of 1959. During their work in Costa Rica they came in contact with Rafael Lucas Rodriguez (Director of the School of Biology) and John deAbate (Vice-Dean of Science and Letters), also a biologist, at the Universidad de Costa Rica. Subsequently, Andy and I conceived the notion of developing a cooperative research and educational program between the University of Southern California and the Universidad de Costa Rica (UCR). The visit of John L. Mohr, chair of Biology at USC, and me to Costa Rica in the spring of 1960 involved a series of meetings with Rodriguez, deAbate and the Dean of Science and Letters, Jose Joaquin Trejos (later President of Costa Rica) to explore a possible joint program in biology between the two institutions. As a result, initially we developed a course designed to encourage USA faculty to begin research in the tropics through a series of grants from the education wing of the National Science Foundation (NSF).

## PRECONCEPTION

Originally, we applied to a section of NSF that had supported a series of summer courses to upgrade high school instructors in biology that funded me in several preceding years. By chance, Les Holdridge, whom I had also met in Costa Rica and had enthusiastically agreed to be involved in the UCR-USC project, while at the World Congress of Forestry in Seattle, talked about this possibility with Jim Bethel, at that time at NSF as Program Director for Special Projects in Science Education. Bethel went back to Washington and pulled our proposal out of the other program, where it was probably languishing, and after review his section recommended funding. I have always said there would never have been an OTS without the welcoming enthusiasm of Rafe Rodriguez and John deAbate and the serendipitous interaction between Les Holdridge and Jim Bethel.

The UCR-USC 6 week course program, Fundamentals of Tropical Biology: An Ecological Approach, for North American faculty was first held in 1961. It was very exciting all around. Lectures and laboratory experiences were held on the UCR campus with several Costa Rica faculty making major contributions. Les Holdridge and his close associate J. Robert Hunter, as I recall at that time still with The Interamerican Institution of Agricultural Sciences (IIAS) in Turrialba (later CATIE), were valuable lecturers. In addition, trips involving instruction in the field of one to several days were taken to diverse habitats. Jim Bethel also visited the course and participated in one field trip as an observer in his NSF capacity.

During this time, other institutions were pursuing tropical field stations. The University of Michigan had for years been trying to establish a tropical field station in Chiapas, Mexico, without success (the Michigan Centrop Committee). Harvard University recently had been kicked out the Atkins Garden in Cuba by Fidel Castro. The University of Miami had plans for a presence in Costa Rica for their faculty and advanced students, and the University of Florida was also interested in establishing a tropical field station.

### THE CONCEPTION

Inspired and encouraged by the response to the UCR-USC activity in Costa Rica, I prepared a successful proposal to NSF to hold a Conference on Problems in Education and Research in Tropical Biology to be held in Costa Rica in the spring of 1962. The conference was held in San Jose, April 23-27, 1962. Participants were biologists from a wide range of fields. Among the many distinguished attendees were, J. Watt Durham, Orlando Park, G. Mann (Chile), Fritz Went, R. L. Fernald, C. H. Muller, C. Sibley, and P. E. Volpe. Jim Bethel was also present as an observer for NSF. Most importantly, in attendance were Norman Hartweg (University of Michigan), W. Henry Leigh (University of Miami), Duncan Clement (Harvard University), and Ray Noggle (University of Florida).

Bob Hunter of the newly formed Tropical Science Center (TSC), mainly a consulting firm, served as co-chairman, partially because of his wide experience and many international contacts in Latin American development projects and his contributions to the UCR-USC courses, with Raphael Rodriguez and me,.

The basic conclusion of the Conference was that there should be a center for topical education and research established in Costa Rica. It was clear that no single institution had the resources to undertake this task. Logically, a cooperative program involving a number of universities offered the best avenue to meet the principal goals identified by the Conference and subsumed under the notion of a center for Tropical Biology.

Hartweg, in particular, was very impressed with the reception by Costa Rica scientists to the notion of a center, as compared to his many frustrating years of experiences in Mexico. Of course, I knew him very well as he was a fellow herpetologist and he had been personally most encouraging and supportive during my graduate and early academic career. During the course of the conference we had several private discussions about where to go next with the center idea which led at least in part to his action in calling the meeting in Coral Gables in early 1963 where OTS was formally established.

On a personal basis, I was both surprised and pleased when Hartweg, during one of our conversations, said something like: "Those of us interested in advancing the study of tropical biology have had a whole bunch of meetings and there are several more scheduled to make recommendations on how best to meet that goal. You didn't wait around for recommendations, but did something about it" referring to the UCR-USC course program.

At this time, I had already received funding for a second and third year of support for the UCR-USC course program in tropical biology. In addition to the lecture, lab, and field experiences, funding for 10 faculty from the 1961 course to carry out research was provided. The grant also allowed for the inclusion of three Latin American scientists as course participants. During the summer of 1962, E. Yale Dawson, a distinguished marine biologist, served as director of the research component of the program and contributed substantially to instruction in the Fundamentals course.

On another front, action on the needs for increased support for tropical education and research were addressed at the NSF sponsored Neotropical Botany Conference in Trinidad (July 2-6, 1962). A principal result of this conference was the establishment of the Association for Tropical Biology (ATB). There was concern by the leadership of both the San Jose Conference and the newly formed ATB regarding their relation to one another. Consequently, John Purseglove, first president of ATB, suggested a meeting of the leadership of the two groups be held in Jamaica in December of 1962. By that time Hartweg, as chairman of the

Michigan Centrop Committee, had already sent out an invitation (December 3, 1962) to nine institutions of higher education, including UCR, to discuss the establishment of a center for tropical biology in Costa Rica.

Nevertheless, representatives of the San Jose Conference Executive Committee, Bob Hunter, John deAbate and I, traveled to Jamaica Dec 17-21, 1962 to meet with representatives of ATB. It was soon clear that Pursglove and his fellow representatives, Tobias Lasser and Bassett Maguire, were focused primarily on creating a dynamic and influential society and publication outlet for the field of tropical biology. We on the other hand had strong programmatic goals, especially the one of establishing an actual center for tropical biology. In the spirit of contributing to the development of tropical biology, our group agreed to dissolve the San Jose Conference and merge with the ATB. We all became enthusiastic members of ATB and subsequently deAbate was elected to the Council and Hunter as Editor for 1963-64 and I was appointed as Chairman of the Research and Development Committee. (1963-65). Hartweg was the second president of ATB (1963-64).

#### THE MAGNIFICENT SEVEN

All of these events contributed to the conception of OTS but the birth of our organization took place at the meeting called by Hartweg at the University of Miami, Coral Gables, January 31-February 2, 1963. Official representatives of nine invited institutions were present (many of whom had been at the San Jose Conference, see above):

Associated Colleges of the Midwest (ACM): Blair Stewart (President)

Universidad de Costa Rica: John de Abate (Vice-Dean Science and Letters)\*

University of Florida: G. Ray Noggle (Chair, Botany)\*

Harvard University: Reed C. Rollins (Professor, Biology; Director of the Gray Herbarium)\*

University of Miami: W. Henry Leigh (Chair, Biology)\*, Eugene H. Mann (Dean, Graduate School)\*, Charles D. Tharp (Vice-President, Finance)

University of Michigan: Norman Hartweg (Professor, Biology; Curator of Herpetology)\*, Stephen H. Spurr (Dean, Graduate School)\*

New York Botanical Garden: Bassett Maguire (Curator)

University of Southern California: Leslie A. Chambers (Professor, Biology; Director Hancock Foundation)\*, Jay M. Savage (Associate Professor; Biology)\*

University of Washington; James S. Bethel (Dean, School of Natural Resources)\*

Hugh Popenoe was also present as an observer for the University of Florida.

The ten founders marked with an asterisk (\*) above subsequently were appointed to the original Board of Directors by their home institutions.

The ACM and New York Botanical Garden never joined OTS.

Although Hartweg was the acknowledged leader in the effort, his dynamic colleague Steve Spurr provided special administrative insights. Initially, it was agreed that our mission was to provide instruction and research training in tropical biology and related disciplines through programs carried out in the tropics. It was also agreed that this could best be done by establishing a center in San Jose, Costa Rica, essentially adopting all of the recommendations of the San Jose Conference of 1962 into our mission statement and action plan. It was Steve Spurr who proposed that the group establish a consortium of universities to meet our goals. This led to the adoption of a charter, a formal set of by-laws, and institution of preliminary arrangements to incorporate in the State of Florida. It was also Steve who proposed the name Organization for Tropical Studies, Inc (OTS), rather than solely emphasize tropical biology, to insure an expansive potential field of activities for the consortium.

John deAbate and I were assigned the task of coming up with a five year budget for the proposed institution. The result was one that averaged \$100,000 per year for the academic program, separate from major research projects. A projected facilities budget for the five year period was developed by Hartweg and Spurr of about \$835,000 during our first 5 years.

Years later Peter Raven, I believe at the 25<sup>th</sup> Anniversary celebration of the founding of OTS, while at the La Selva Station, remarked that “In 1963 you guys could not have imagined what OTS has now become, with state of the art facilities and an unrivalled reputation for its role in tropical biology”. My answer was “Peter, you weren’t there. From the beginning the founders envisaged OTS as becoming the premier center for tropical education and research, in effect the Woods Hole Marine Biological Laboratory of the tropics.” As indeed, we are.

Within months, the seven original university members of OTS approved the recommendations of the organizing group that had met in Miami with a commitment of institutional funds for annual dues and support for the Board of Directors to attend their meetings. As a result, the first meeting of the Board of Directors was held June 25-26, 1963, again at the University of Miami, Coral Gables. By that time the University of Kansas asked to join OTS and was admitted as a charter member. The University of California later that year was also made a charter member. All board members that attended the organizational meeting earlier in the year attended except Les Chambers. Additional members of the Board of Directors attending this meeting were: E. O. Wilson (Harvard University) and William J. Argersinger (University of Kansas). Blair Stewart (ACM) and Herbert Baker (University of California) attended as observers. At that meeting Hartweg was elected president, deAbate Vice-President, Leigh Treasurer and me secretary. Because I had received the funding for the 1963 Fundamentals of Tropical Biology course and related activities through USC, one of our first

moves was to transfer the grant to OTS. As I was going on sabbatical to Costa Rica from July, 1963-September, 1964, it was decided that deAbate, as Special Consultant, and I, as Executive Secretary, would manage OTS operations in that period, each on a part-time basis..

In the summer of 1963 OTS was operational. The Fundamentals course for faculty was continued as was faculty research support of select participants from the previous two summer's courses. The faculty section again included three participants from Latin American institutions. In addition, we added a graduate student component for 12 select students that included notably George Gorman, Steve Hubbell, Dan Janzen, Lee Miller, Fred Rickson, and Sam Snedaker. James L. Vial, who had been a participant in the first UCR-USC course, and was now on the faculty of the Universidad de Costa Rica, served as Associate Director for the graduate student section. Guillermo Mann of the Universidad de Chile contributed many lectures and served to coordinate the activities of the research participants.

As an aside, it should be noted that the period of 1963-64 was the time when Volcán Irazú was erupting off and on weekly, if not daily. These eruptions spewed ash on the city of San Jose so frequently there would be several centimeters of ash on cars and buildings following each explosive episode. The water system was under attack from the ash because it plugged all the filters, roofs often failed from the weight of the ash, and the ash prevented the fertilization and killed the flowers of the coffee plants, wiping out the backbone of the Costa Rican economy.

During the summer of 1963, deAbate, Vial and I prepared a new submission to NSF for continuing funding for 1964-1965. The Fundamentals course was extended to 8 weeks and an advanced course in The Biology and Evolution of Tropical Plants was also to be offered. However, changes in the personnel in the Special Projects in Science Education section at NSF led to a long delay in action on our proposal and we spent many anxious weeks before funding became a reality. During the interim period, deAbate and I were involved in numerous meetings with key individuals and groups in Costa Rica to inform them of OTS' plans and to enlist their aid in developing our programs. During fall 1963 I also visited several founding member campuses of OTS, giving seminars on tropical biology, meeting with key faculty and administrators, trying to encourage maximum involvement of these constituents in our programs. John deAbate and I also had a half day meeting with the Ford Foundation staff in New York seeking long term funding for OTS. Subsequently, we prepared a draft proposal for support from the foundation for aspects of our program that they had suggested were appropriate areas for their funding. Unfortunately, this proposal was never fully developed and submitted to the Ford Foundation by my successor as head of our operations in Costa Rica, OTS's first Executive-Director, William Hathaway. However some Ford Foundation support was forthcoming a few years later.

1964 started out badly for OTS with the untimely death of President Hartweg in February. Reid Rollins, from whom I had taken a course in as a freshman at Stanford University, was elected as the second president. Worries about whether NSF was going to come through with support for the 1964 and 1965 programs plagued activities in getting faculty commitments, making firm offers to course and research participants, and for staff support.

One serendipitous event is worth mentioning. My wife wanted to go to Panama for a few days break but, as our children were on her passport, she could not leave Costa Rica without taking them with her. She explained her situation to a Costa Rica travel agent, Jorge Campabadal. Jorge said “no problem I’ll arrange everything”. Sure enough, no worries and she was off to Panama the next day. It then occurred to deAbate and me that we had been spending hours making travel arrangements for all OTS participants and staff. We decided here was a guy that got things done so we turned over all transportation, national and international, to Jorge from then on. Jorge “George”, of course, later became a fulltime OTS employee and ultimately Resident Director of OTS Costa Rica operations under future Executive-Director Steve Preston.

The expanded OTS education program for summer 1964 included the Fundamentals course, a series of specialized short courses (seven two hour lectures) given in the evening on Tropical Social Insects (Charles Michener) Tropical Population Biology (Nelson Hairston), and Tropical Marine Biology (Marta Vannucci), and an advanced course in Biology and Evolution of Tropical Plants. Participation now consisted of about equal numbers of young faculty and first or second year graduate students with a number of Latin American participants included in each course. In addition, research funding for nine faculty alumni of previous Fundamentals courses and three graduate students was also provided.

The late funding of the program and the increase in the size of operations created several logistic problems, particularly in housing and transportation, but with Vial and deAbate working to manage the Fundamentals course, Rodrigo Zeledón (later Minister of Science for Costa Rica) of UCR coordinating research activities, and Ramon Ferreyra of the Universidad de San Marcos, Peru leading the Tropical Plants course, OTS had an exciting second summer.

Of course, during the entire period from 1960 onward, I was involved in my own research program in Costa Rica. In 1961, I had encouraged one of my graduate students, William A. Bussing, who was primarily interested in tropical fishes, to begin fieldwork in the country. Bill subsequently became a member of the UCR faculty and the leading authority on Costa Rica’s marine and freshwater fishes. During 1963-1964 Norman J. Scott, another of my graduate students, and I carried out numerous collecting trips throughout the Republic. This work, in large

part formed the basis for my continuing research on the herpetology of Central America. At the end of the summer of 1964 Norm replaced Jim Vial on the faculty at UCR. Scott over the next few years was the primary course coordinator for the OTS Fundamentals course. It is largely due to Norm and Dan Janzen that the current experiential learning model of hands on, fulltime field instruction, supported by rigorous ecological theory that developed in the summer of 1965, was instituted as the foundation for all subsequent iterations of the Fundamentals course.

When I left Costa Rica in August 1964 to return to USC, little did I know of the near disastrous course of events that were to follow. Bill Hatheway, formerly of a Ford Foundation program in Mexico, had been appointed Executive-Director of OTS and moved to Costa Rica at that time. Bill bought my Volkswagen bug and my wife and I gave his family many things that we were not going to ship back to the US including a trunk full of our kids' toys. As an aside, these were passed on to Steve Preston's family when he took over. Unfortunately, Bill came under the influence of our helpful Tropical Science Center founders, Les Holdridge and Bob Hunter, of the early periods of the UCR-USC and OTS programs. They now had established TSC and were looking for ways to insure its long-term funding. Plans had developed to hold a Fundamentals course during the winter of 1985 with the famous tropical ecologist, Paul Richards, as the lead. It had also been decided to have the dynamic alumnus of an earlier course, Dan Janzen, serve as the graduate teaching assistant. As the time for the course approached, Hatheway essentially turned all responsibility over to TSC, completely ignoring the several UCR faculty members that had been involved during the early years. Once the program began there was immediate conflict between the TSC folks and Janzen on course content, course operations and what he perceived as the shallowness of content provided. No surprise! Paul Richards was caught in the middle. Fortunately, someone had their head on straight. John deAbate sent me a letter, in which he outlined what was happening. I will always remember his last line: "The ship is sinking!" I immediately contacted Reid Rollins who within 48 hours got on a plane to Costa Rica, assessed the situation and basically fired Hatheway. Stone (1988) kindly stated that Hatheway had resigned. deAbate, Scott, and Janzen took over to establish the basis for the 1965 summer course and research programs.

That spring, Steve Preston, a colleague of Steve Spurr at Michigan, planned a sabbatical in Costa Rica. Seizing the moment, the OTS Board at a meeting in Seattle appointed Preston Interim Director in Costa Rica, later Executive Director. I was fortunate to be a resource person in the Fundamentals course run by Scott and Janzen that summer and be a part of the dynamic new approach to the course that they developed. The course was now primarily for graduate students. Note, the original idea worked: if one could get faculty involvement, they would encourage

their grad students to follow suit. It was really a great experience! Norm and Dan were superb and we had a great grad student cadre including Joel Cohen, Bob Jenkins, Harold Voris, Heb Rosenberg, and Joel Cracraft, among others.

I should mention that Holdridge, Hunter, and their colleague, Joe Tosi of TSC, for a long time remained anti OTS, even though Les finally sold his Finca La Selva to OTS. In particular, they apparently blamed me for thwarting the attempted TSC coup during Hatheway's tenure. It was only many years later, when OTS presented Holdridge with an award of appreciation, that some of our formerly congenial relationship was restored. I do wish to remind the reader that when Les sold La Selva to OTS he demanded that the sale be in gold bullion!

In this short period, OTS had survived three major crises, the delay of funding from NSF for the years 1964-1965, the death of Hartweg, and the Hathaway-TSC fiasco. In the first case, deAbate and I did our best to meet any concerns NSF had about the program and convince the Program Director of the fundamental value of the program. In the second, Rollins reluctantly took over the presidency. In the last crisis, fortunately, Reid Rollins and deAbate were able to take effective action that insured continued success and set the stage for OTS's next 40 years.

I close by noting that I have had the extreme privilege and pleasure to have been involved with OTS for most of my adult life. The many wonderful colleagues and students, who became colleagues later, have been an inspiration to me and have been ample reward for my efforts for OTS. "As ye sow, so shall ye reap" Happy 45<sup>th</sup> Birthday OTS, and many more!